

Work Order ID 158225

Thursday, March 16, 2017 11:20:54 AM

158225

Page 1

Item ID: D2281 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Jack Saddle
Start Date: 3/20/2017 Start Qty: 60.00 ***60*** Cust Item ID:
Required Date: 3/27/2017 Req'd Qty: 60.00 ***60*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: DAS 21 3-29 Date: MAR 16 2017 Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2281	Rev G								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	1.79							
FLOW CNC Waterjet	1-Cut as per Dwg D2281 Dwg Rev: <u>6</u> Prog Rev: <u>6</u> 2- Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.60							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	1.20							
Quality Control									

DAS
38
9-89
MAR 20 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval																																																									
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Thursday, March 16, 2017 11:20:54 AM

Page 2

Stop *NS2*

Customer:

Stop *NR2*

**Insp.
Stamp**

0.00

Small Fab

4.98

Small Fab

Memo

Small Fab

Deburr

DAS
30
9-89

N/A

140

0.28

NC BRAKE

0.67

Brake NC

Memo

Brake NC

Form as per D2281 using D2281-T2

DAS
30
9-89

60

MAR 21 2017

150

QC5- Inspect part completeness to step on W/O

0.00

Memo

1.20

QC

Quality Control

62

DAS
38
9-8

MAR 22 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																													
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158225

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

60

60

Reference: SCHEDULED/S

Run Start *NR1*

Stop *NR2*

**Insp.
Stamp**

160

DAS
6
9-89

LOCATION : WA001

MAR 22 2017

170

6.00

Quality Control

17/3/23 
mf
17-3-23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
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Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
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Past Expiry Date	☐	Manufacturing Process	☐	OTHER :							
Misidentified	☐	Past Due	☐								

Picklist Print

Thursday, March 16, 2017 11:20:58 AM

Page 1

Work Order ID: 158225

158225

Parent Item: D2281

D2281

Parent Item Name: Jack Saddle

Start Date: 3/20/2017

Required Date: 3/27/2017

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP Rev:A Removed from 9 Digit 05-12-02 JLM
IPP: rev B 06.07.17 waterjet EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S14GA		Purchased	No			100	sf	50.3150	0.125	7.894734			
M304S14GA									**				
304SS sheet .080													

DAS
46
9-89

17/03/19

Location

Loc Qty

Loc Code

MAT019

50.315

M134604

4.6

M135860

1.39

M136463

12.325

M136896

32

8

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

DART AEROSPACE LTD		Work Order: 158225
Description: Jack Saddle		Part Number: D2281
Inspection Dwg: D2281 Rev: G		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.468	+/-0.010	4.473	✓		Dec. 01	
4.114	+/-0.010	4.118	✓			
2.933	+/-0.010	2.933	✓			
1.535	+/-0.010	1.543	✓			
0.354	+/-0.010	0.356	✓			
0.354	+/-0.010	0.352	✓			
0.604	+/-0.010	0.604	✓			
2.000	+/-0.010	2.003	✓			
3.396	+/-0.010	2.398	✓			
3.646	+/-0.010	3.646	✓			
4.000	+/-0.010	4.006	✓			
1.525	+/-0.010	1.533	✓			
2.475	+/-0.010	2.475	✓			
Ø0.323	+0.006/-0.001	0.324	✓			
0.080	+/-0.010	0.073	✓			

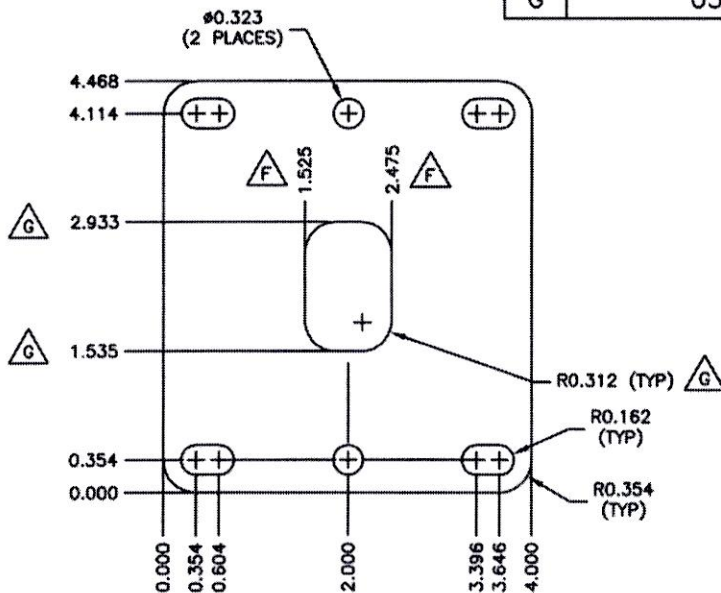
Measured by: DAS 46 9-89	Audited by: DAS 38 9-89	Prototype Approval:	N/A
Date: 17/03/18	Date: MAR 20 2017	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.09.08	New Issue	KJ/JLM	

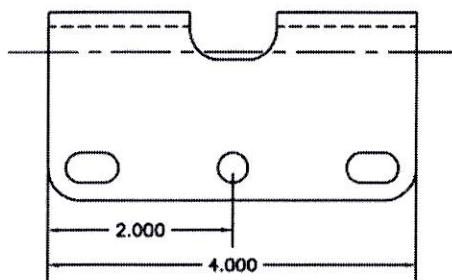


DESIGN BW	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2281	REV. G SHEET 1 OF 1
DATE 05.06.07		TITLE JACK SADDLE	SCALE 1:2
A	94.10.14	NEW ISSUE	
B	94.10.18	DIMENSION WAS 2.878	
C	94.11.04	ADD TOOLING NOTCH	
D	98.03.27	R0.350 WAS R0.280	
E	04.11.18	REMOVE TOOLING NOTCHES	
F	05.03.16	REDESIGN FLAT PATTERN	
G	05.06.07	REDESIGN FLAT PATTERN	

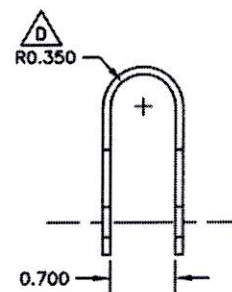
RELEASED
[Signature]
05/08/11



FLAT LAYOUT



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 158225 u5
17-03-16



D2281 JACK SADDLE

- 1) MATERIAL: 304/316 SS, 0.080 THICK (REF DART SPEC. M304S14GA)
- 2) FINISH: NONE
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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